

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1 (currently amended): A high strength electrical steel sheet ~~and a processed part of the same~~ characterized by containing, by mass %, C: 0.06% or less, Si: ~~0.2~~ 2.0 to 6.5%, Mn: 0.05 to 3.0%, P: 0.30% or less, S or Se: 0.040% or less, Al: 2.50% or less, Cu: 0.6 to 8.0%, Cr: 4.5% or less, N: 0.0400% or less, and a balance of Fe and unavoidable impurities and containing a metal phase comprised of Cu having a diameter of 0.1 μm or less in the steel sheet by means of holding the steel sheet in a heat treatment at a temperature range of 300°C to 650°C for 5 seconds or more ~~during production of the processed part~~.

2 (currently amended): A high strength electrical steel sheet ~~and a processed part of the same~~ as set forth in claim 1, characterized by further containing, by mass%, one or more of Nb: ~~8%~~ 8% or less, Ti: 1.0% or less, B: 0.010% or less, and Ni: 5% or less.

3 (currently amended): A high strength electrical steel sheet ~~and a processed part of the same~~ as set forth in claim 1, characterized by further containing, by mass%, one or more of Bi, Mo, W, Sn, Sb, Mg, Ca, Ce, La, and Co in a total of 0.5% or less.

4 (currently amended): A high strength electrical steel sheet ~~and a processed part of the same~~ as set forth in claim 1, wherein the number density of the metal phase comprised of Cu present in said steel is $20/\mu\text{m}^3$ or more.

5 (currently amended): A high strength electrical steel sheet ~~and a processed part of the same~~ as set forth in claim 1, wherein said steel sheet has an average crystal grain size of 30 to 300 μm .

6 (currently amended): A high strength electrical steel sheet ~~and a processed part of the same~~ as set forth in claim 1, wherein the steel sheet has a processed structure remaining in it.

7 (currently amended): A high strength electrical steel sheet ~~and a processed part of the same~~ as set forth in claim 1, characterized in that the steel sheet ~~or the part~~ contains a Nb carbide or nitride.

Claims 8 to 10: (canceled).

11 (currently amended): A processed part of a high strength electrical steel sheet as set forth in claim 1, ~~characterized~~ wherein the part is heat treated after processing for a shaping step to form the processed part, so that the metal phase comprised mainly of Cu present in the processed part has a number density of $20/\mu\text{m}^3$ or more.

12 (currently amended): A processed part of a high strength electrical steel sheet as set forth in claim ~~[[1]]~~ 11, ~~characterized~~ wherein ~~the part is heat treated after processing for shaping so that~~ the metal phase ~~comprised mainly of Cu present in the part~~ has an average size of 0.1 μm or less.

13 (currently amended): A processed part of a high strength electrical steel sheet as set forth in claim ~~[[1]]~~ 11, ~~characterized~~ wherein the part is ~~heat treated after processing for shaping so that~~ the part has an average crystal grains size of 3 to 300 μm .

14 (currently amended): A processed part of a high strength electrical steel sheet as set forth in claim ~~[[1]]~~ 11, ~~characterized~~ wherein ~~the part is heat treated after processing for shaping so that~~ the number density of the metal phase ~~comprised mainly of Cu with a size of 0.1 μm or less in the processed part~~ is increased by 10-fold or more after the heat treatment.

15 (currently amended): A processed part of a high strength electrical steel sheet as set forth in claim ~~[[1]]~~ 11, wherein ~~the part is heat treated after processing for~~

~~shaping so that the~~ tensile strength of the part is increased by 30 MPa or more after the heat treatment.

16 (currently amended): A processed part of a high strength electrical steel sheet as set forth in claim ~~[[1]]~~ 11, wherein ~~the part is heat treated after processing for~~ shaping so that the hardness of the part is increased by 1.1-fold or more after the heat treatment.

Claims 17 to 20: (canceled).

21. (new) A high strength electrical steel sheet as set forth in claim 1, characterized by containing, by mass %, Si: 3.1 to 6.5%.